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ABSTRACT

Three concerns were the focusing points for the conference: (1) the impact the continuing change in the student population has on the faculty; (2) the implications for higher education and society in general with respect to increasing demands for the credentialing of professional competency; and (3) the ways in which higher education can respond to a wide diversity of needs and at the same time maintain academic quality. Addresses touched on the topics of new learners and their impact on education (Patricia K. Cross); professional competency and societal credentialing (Cyril O. Houle); diversity of response and maintenance of quality in higher education (Morris T. Keeton); issues and answers, a panel discussion; and perspectives (John Richardson and Hilton Smith). (MSE)

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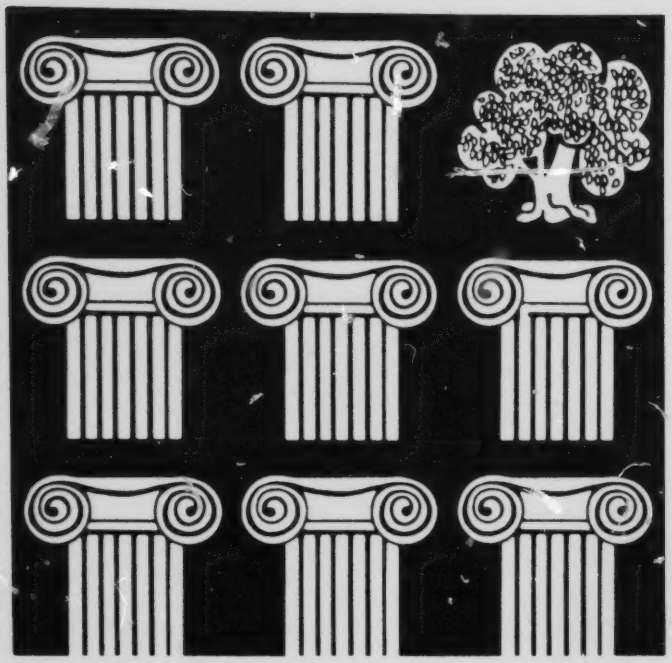

PROCEEDINGS

THE SECOND ANNUAL TENNESSEE SYMPOSIUM ON HIGHER EDUCATION

LEARNING AND THE LEARNERS

EDITORS:

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Sponsored by
The Tennessee Higher Education Commission
The State University and Community College System and
The University of Tennessee

PROCEEDINGS

LEARNING AND THE LEARNERS

The Second Annual Tennessee Symposium
On Higher Education

February 9-10, 1977

Middle Tennessee State University
Murfreesboro, Tennessee 37132

Editors

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University of Tennessee at Martin

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July, 1977

PREFACE

The Second Annual Tennessee Symposium on Higher Education: Learning and the Learners is a continuation of an effort begun in October, 1975. That first program, "Nontraditional Learning in Tennessee," drew attention to many of the nontraditional programs conducted by institutions of higher education throughout the state. Its purpose was to bring into clearer focus the state of nontraditional education in Tennessee, to stimulate further development of these programs, and to enhance understanding of their role in higher education.

The present symposium was a continuation of that spirit of inquiry and enlightenment but changed its focus from programatic diversity in nontraditional programs to a concern with some underlying issues in nontraditional learning. During the planning process three basic concerns surfaced repeatedly and were addressed by the program's major presentors. Those concerns, expressed as interrogatories, were: (1) "What impact does the continuing change in the student population have upon the faculty? (2) What are the implications for higher education and society at large with respect to increasing demands for the credentialing of professional competency? and (3) How can higher education respond to a wide diversity of needs and at the same time maintain academic quality?" Moreover, in order that the future be seen as part of an historical continuum, a "Perspectives" session was deemed to be a logical conclusion to the Symposium.

Both Dr. Cross and Keeton spoke from prepared texts which have been reproduced verbatim. Dr. Houle's comments were recorded, transcribed, and edited by the editors of the proceedings.

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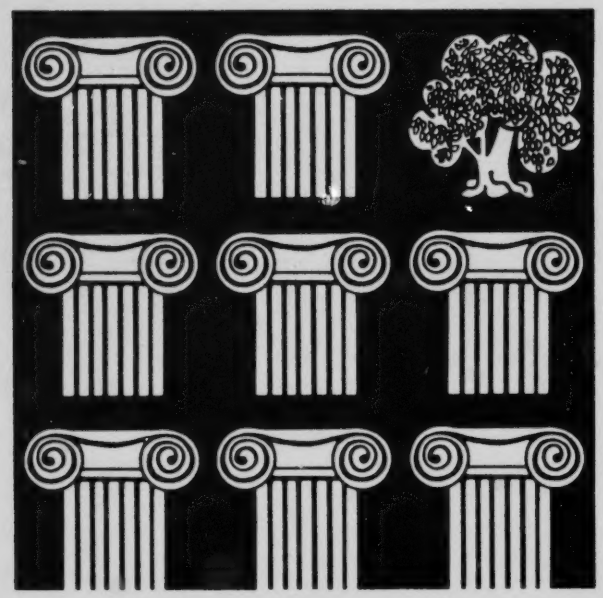

The Second Annual Tennessee Symposium On Higher Education:

LEARNING AND THE LEARNERS

Sponsored by
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Dr. Cyril Houle is a faculty member of the Department of Education at the University of Chicago. He also serves as Senior Program Consultant for the W. K. Kellogg Foundation, a position he has held since September, 1976. He has served as consultant on adult education to a number of local, state, national, and international governmental units, as well as to private institutions and associations. He served as director of the 1950 UNESCO workshop on Adult Education in the Library and was twice appointed by President Lyndon B. Johnson to the National Advisory Council on Extension and Continuing Education. Dr. Houle has published several books, his most notable being *The Design of Education*. A graduate of the University of Florida at Gainesville, he received his Ph. D. from the University of Chicago and has since been awarded several honorary doctorates.

Dr. K. Patricia Cross is presently employed at The University of California, Berkeley, as Senior Research Psychologist for the Educational Testing Service and as Research Educator for the Center for Research and Development in Higher Education, also at Berkeley. Dr. Cross is a member of the American Association of Higher Education and was president in 1974-75. She has written many articles and books in the field of education. In 1968, Dr. Cross received the Pi Lambda Theta Best Books award for *The Junior College Student: A Research Description*. Her book *Beyond the Open Door: New Students to Higher Education* was selected, in 1971, by School & Society as an outstanding education book of the year. Dr. Cross received her undergraduate degree from Illinois State University and her master's and doctorate degrees from The University of Illinois.

Dr. Morris T. Keeton is Provost and Vice President of Antioch College in Columbia, Maryland. Since 1938, Dr. Keeton has been actively involved in numerous education associations and committees, including the American Philosophical Association and the American Friends Service Committee. In 1972, he was elected President of the American Association for Higher Education. He was voted one of 44 "influential" Educators by 4000 persons polled by Change Magazine in 1975. The author of numerous major publications and articles, Dr. Keeton presented "Is Red Tape Strangling Reform?" at the 30th National Conference on Higher Education, American Association for Higher Education, in March 1975. Dr. Keeton received his undergraduate and master's degrees from Southern Methodist University and his doctorate degree from Harvard University. He is also Professor of Philosophy and Religion at Antioch College.

PROGRAM

Wednesday, February 9, 1977

9:00 a.m.-1:00 p.m. Registration
Lobby of Learning Resources Center (LRC)

1:00 p.m.-3:00 p.m. Auditorium, LRC
First General Session:
Presiding - Dr. Coy Hollis
Welcome - Dr. Melvin Scarlett

The Changing Student Population and Its Impact on the Faculty

Dr. K. Patricia Cross
Reactors: Mr. Nathaniel A. Crippens
Dr. Barbara S. Haskew
Dr. John D. Jones

3:00 p.m.-3:30 p.m. Coffee

3:30 p.m.-5:00 p.m. Auditorium, LRC
Second General Session:
Presiding - Dr. John Harris

Professional Competency and Societal Credentialing

Dr. Cyril O. Houle
Reactors: Dr. Gerald L. Gehre
Miss Dorothy L. Hocker
Dr. Van Norwood Oliphant

5:45 p.m.-7:45 p.m. Banquet
Tennessee Room, Student Union Building
Presiding - Dr. Jerry McGee
Introductions - Dr. Larry T. McGehee
Comments - Dr. Edward Boling

Diversity of Response and Maintenance of Quality

Dr. Morris T. Keeton

8:00 p.m. - Small Group Discussions

Thursday, February 10, 1977

8:00 a.m.-9:30 a.m. Late Registration
Lobby LRC

8:00 a.m.-8:30 a.m. Coffee, Juice, and Sweet Rolls
University Center, Room 322

8:30 a.m.-9:15 a.m. Continuation of Discussion Groups

9:15 a.m.-9:45 a.m. Break

9:45 a.m.-11:30 a.m. Auditorium, LRC
Third General Session:
Presiding - Dr. Milton Phillips

Issues and Answers

Panel: Dr. K. Patricia Cross
Dr. Cyril O. Houle
Dr. Morris T. Keeton

11:30 a.m.-12:00 noon Break

12:00 noon-1:00 p.m. Luncheon
Tennessee Room, Student Union Building

1:00 p.m.-2:00 p.m.
Fourth General Session:
Presiding - Dr. John Harris
Comments - Dr. Edward J. Boling
Perspectives: Dr. John Richardson
Dr. Hilton Smith

2:00 p.m. Adjourn

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NEW LEARNERS AND THEIR IMPACT ON EDUCATION

K. Patricia Cross
The University of California, Berkeley

Although the purposes and priorities of individual colleges and universities vary a great deal in this country, there are some national trends that inevitably affect all institutions. And nationally almost nothing in higher education is the same as it was just two short decades ago. It is difficult enough just to do the old things better or to do them for more people or at less cost, but it is understandably bewildering to discover that the national goals of the 1950s are no longer the goals for the 1970s. It now appears that higher education should not only abandon some of its old goals, but that it should try hard to improve in the opposite direction. The selective admissions and the call for academic excellence of the 1950s have given way to open admissions and the cry for equality of educational opportunity. Attention to the training of intellectually elite graduate students has done an about-face, and our interest is now centered on educationally disadvantaged undergraduates. The exhilaration of supplying a society hungry for college educated workers has become the headache of finding jobs for graduates. The fierce competition for distinguished faculty members at the professorial level has turned into a cool sifting through hundreds of applications to fill a job at the level of assistant professor. Institutional autonomy has given way to coordination by state

superboards. Faculty individualism is being replaced by collective bargaining. And the role of playing hero to a proud and adoring public has given way to defending ourselves to a critical public demanding accountability.

While change within higher education may be slow, the changing role of higher education within the broader society has occurred with dizzying speed. In the space of 20 years, educators have been asked to forego the easy route of selecting students who fit the colleges we happen to have and to take on the more difficult task of creating colleges that fit the needs of students who are walking through the opening doors.

This national goal involves more than an answer to the pragmatic question of how to convert our elitist model of higher education into a system that will serve the masses. The fact that we are asked to do it represents a fundamental change in the purposes of higher education. When technology was young and educational resources were scarce, it seemed reasonable to use limited facilities to educate young people who had already demonstrated their intellectual promise. The expectation was that those selected would use their training and knowledge to raise the standard of living for everyone.

By-and-large we have not been disappointed. A relatively small number of well-educated scientists and businessmen have created a seemingly unending supply of the comforts and luxuries of technology. The problem we face now lies not so much in the further discovery and production of material goods as in better distribution systems, broader-based knowledge, and greater concern for the individual. The way to raise the standard of living in this country is no longer to concentrate our full resources on educating a few to excellence, but rather to educate the masses to their full humanity.

One measure of the civilization of a country is the extent of education among the so-called common people. For well over 100 years now, American democracy has been engaged in raising the level of education of the citizenry, and higher education has been a major instrument for expanding the base of well-educated citizens.

The land-grant institutions were created in the last century to accommodate the rising aspirations of the children of farmers and factory workers. The community colleges were established in this century to extend college opportunities to still broader segments of the population. Today's non-traditional education is the last frontier of the expansionist movement. It promises to complete the task of making college-level study available to every citizen who wants it.

The pursuit of egalitarian ideals has been responsible for more than growth, however. Directly or indirectly, it has been responsible for most major change in higher education. Each new group of learners absorbed into the colleges has left a permanent imprint on the course of higher education. The land-grant colleges broadened the classical curriculum to include the applied sciences and mechanical arts, and they introduced the massive university campus. The community colleges extended the curriculum still further to include occupational subjects, and they further stretched the geographical boundaries of campus to include the community. The non-traditional movement is taking the ultimate expansionist step with its promise to use all learning experiences as the curriculum, and the world as its campus.

It is now apparent that higher education intends to serve the full spectrum of learners--rich and poor, black and white, male and female, old and young, the able and not-so-able, the mobile and not-so-mobile. It also appears that colleges intend to offer the full range of subject matter--

classical, applied, vocational, and avocational. And it is clear that students can be campus residents, commuters to campus, or people who never set foot on a physical entity known as "campus."

What does higher education do for an encore in the next century when, conceptually if not yet practically, it delivers all of the sujbects to all of the people wherever and whenever they want them? What new forces will arise to provide the vigorous impetus for change now that there are no new constituencies to recruit? Where will the cutting edge of progress be by the year 2000?

I predict that once we have reached our goal of access for all, we will turn our attention to providing education for each. A 21st century goal of maximizing the impact of education on individuals is infinitely more complex and more demanding than our 20th century goal of providing access for all. As a result, we are going to have to be much more thoughtful in the years ahead. The expansionist era of higher education, for all its virtues, has not been especially thoughtful. It has been largely a matter of education by formula--identify a new constituency, find out what it wants and needs, and expand the system to include it.

Because higher education has been such a dramatic growth industry, most of our experience in thinking about the future has been concerned with planning for differences in degree rather than differences in kind. During the so-called Golden Age of higher education, we had the exhilaration of planning for more students, more teachers, larger budgets, new buildings, expanded research activities, and in general, more of everything. Now the growth era has ended, but we are equally busy coping with the negative side of the numbers game--how to survive steady-state or declining enrollments, spiraling inflation, too many tenured teachers and not enough money. While I do not

deny the urgency of quantitative matters in planning for the future, I want to direct my attention today to the ways in which the education of the future will be different in kind rather than different in degree from today's education. When the year 2000 rolls around in less than 25 years, will the lives of teachers and students be much the same as they are today--an extension of the past--or will they be engaged in different kinds of activities?

As you might suspect since I set this up this way, I think teaching and learning in the 21st century is going to consist of different activities from those of today. History, I should warn you, is not on my side. As Clark Kerr (1976) has observed, "of all the institutions of society, none has changed as little over the centuries as has higher education. You could go back to the University of Bolongna in the 12th century and feel more or less at home." Dr. Kerr, of course, was talking about instructional methods and not about professorial lives and academic politics, which I think we might admit have undergone some changes in the last eight centuries. Why, then, should I expect that instructional methods, which survived the invention of the printing press pretty much intact, be slated for change now? Simply because the traditional methods of the average classroom are out of tune with today's missions. While we have demonstrated that we can provide access to college for a wide diversity of learners, we have not proved that we can provide an education that is useful and helpful to a majority of people.

Two groups of new learners are of special concern. The greatest increase in the numbers of students entering college directly from high school is coming from the 2nd and 3rd quartiles of academic ability. In my own research, I have labeled students with poor past records of academic achievement, New Students to higher education (Cross, 1971). Gaining admission to college through the open doors of community colleges, these students present

a special challenge to teachers because they have not been good learners in the academic arena. New Students, never before considered "college material," are now continuing their education beyond high school in significant numbers.

A second group of new clientele are referred to as non-traditional learners. These are the adult, part-time students newly received into higher education through so-called non-traditional programs which emphasize modifications in the schedules, locations, measures, and delivery systems of education. Non-traditional learners constitute the fastest growing segment of college students. Not only is the number of adults in the population increasing through the phenomenon of the World War II baby bulge moving into the adult years, but the participation of adults in education is growing two and one-half times as fast as their numbers in the population. Today, more than one-third of all degree-credit college students are over the age of 25 and that proportion will continue to grow.

Research describing New Students and non-traditional students show them to have quite different characteristics. New Students are usually from blue collar families; they have weak educational backgrounds; and in general can be characterized as immature and dependent learners. Non-traditional students, on the other hand, are more often well-motivated, mature learners from white collar positions and with records of successful educational experiences. Yet these two groups, so different on the surface, make some common demands for change in higher education.

It should probably be made explicit at the outset that I am assuming postsecondary education will eventually do whatever is necessary to provide useful education for these new constituents. Although one hears talk of a new conservatism that will eventually restore traditional standards to academe through backing away from commitments to equal opportunity and to the new

clientele, I think that is highly unlikely. We have had a national, publicly expressed commitment to provide postsecondary education for everyone who wants it ever since the Truman Commission, and I believe that it would be both socially regressive as well as politically explosive to deprive people of rights once promised. Thus, although some people may resist the changes that will be required, eventually the new clientele will be absorbed into higher education to leave their permanent mark, much as generations of land-grant and community college students before them have done.

Let's look first at the impact of New Students on higher education. These students are usually first generation college students entering open door community colleges with weak educational backgrounds and rather dismal past experiences with school learning. The nature-nuture controversy regarding the capacity of New Students to profit from and contribute to academic learning is not yet resolved. But it is quite clear that almost all New Students can learn a great deal more than they have learned, and that school learning can be a positive rather than negative experience for them.

New Students have already had a major impact on instruction. Self-paced mastery learning, which has particular advantages in the education of New Students, has swept through community colleges with amazing speed. In the short time span of three years the use of self-paced learning modules has more than doubled, going from 31 percent of the community colleges in 1971 to 68 percent in 1974 (Cross, 1976).

More interesting than the speed of adoption of self-paced mastery learning, however, is its potential for upsetting conventional ways of thinking about education. The simple formula for mastery learning is that the student must learn a unit to mastery regardless of how long it takes. This is quite the reverse of traditional education which insists that all students

spend equal amounts of time in the classroom but permits them to learn to varying levels of achievement. In traditional education we turn out students who are well educated and those who are not, but we certify that all have spent the same amount of time at the task--surely a meaningless measure of learning. The conventional grading system does not solve the problem; it just acknowledges that some students learned a lot in the time specified and received A's and B's, while others learned little and received D's and F's. If Bloom, Bruner, and other scholars are correct in their assertion that anyone can learn a subject to mastery if given adequate time and appropriate help, then we have a breakthrough that permits us to provide for individual differences through holding achievement constant (mastery for everyone) and letting time vary.

Although I think that the concept of mastery learning is valuable for all learners, it has special significance for the education of New Students. Its advantages are both cognitive and affective. It lays the cognitive foundation for future learning by insisting that one unit must be mastered before the student may proceed to subsequent learning. And it carries an affective message through demonstration to low-achieving students that they too are capable of doing good work. To most New Students, those two critically important experiences are missing from most of traditional education. New Students are perpetually at a cognitive disadvantage in school because they are rushed along to advanced learning without laying the foundation of the more elementary concepts. It is almost impossible to gain anything from a study of algebra without knowing the multiplication tables, and it is difficult to grasp the significance of history in the absence of an adequate reading vocabulary. To the extent that knowledge is cumulative and sequential, efficiency in learning depends upon mastering each step in turn. Research

demonstrates that as children proceed through school, the bright get brighter and the dull get duller as the gap between achievers and non-achievers increases (Coleman and others, 1966). The widening gap is probably due to the efficiency factor in learning. Whereas achievers have the tools and the background to make good use of further education, the future learning of non-achievers is perpetually thwarted by their failure to master fundamentals.

Even worse than the cognitive handicaps wrought by traditional education's notion that everyone should move along with the group, is the affective damage done to young people who are offered no alternative to doing poor work. Rarely do New Students experience the satisfaction of doing school work in which they can take pride. Mastery learning permits New Students, for perhaps the first time in their lives, to do well at school learning tasks.

While mastery learning has undeniable merit for individual learners, it also has some unsung advantages for the educational system. Mastery learning is the only educational concept that I know of right now that offers a solution to the concern about the erosion of academic standards. If all students master the subject matter, then the charge of lower academic standards for New Students cannot be leveled at egalitarian higher education.

In the strange logic of higher education, however, the very idea that every student in the class can learn a subject to the same high level of achievement is unacceptable to some standards buffs. If every student studies the learning unit until he masters it, then every student deserves an A--if by an A grade we mean to certify that the student has mastered the learning task and not simply that he is one of the best in a particular class. A grading curve with mostly A's is sound educationally, but is is anathema to those accustomed to thinking of educational results measured by the bell-shaped normal curve. The normal curve, after all, is a statistical tool

designed to reflect the result of random processes. If there are no factors operating except chance, then the normal curve is the result. To the extent that purposeful, directed influences are operating, the curve should depart from a chance distribution. Education is not a random process; the outcomes of successful education should push the grading curve away from anything resembling a chance distribution. Unfortunately, many people equate the preservation of the normal grading curve with the preservation of academic standards. Actually, standards are served only when students learn the material. And there is ample research evidence that students do learn the material better under conditions of mastery learning (Cross, 1976).

To the extent that the nation is committed to moving beyond the goal of access for all toward the goal of education for each, the absorption of New Students into colleges and universities will have a permanent impact on education. The implementation of the concept of self-paced mastery learning changes the role of faculty members from purveyors of information and judges of performance to committed partners in learning. Teaching takes on new challenges because in individualized instruction there is no way for teachers to avoid learning something about how individuals learn. Learning problems are seen as they occur, and immediate feedback is provided about the effectiveness or ineffectiveness of a particular teaching approach. These obvious aids to teaching do not occur when the predominant mode of teaching is the lecture method. Some college professors have very little understanding of learning problems because they rarely sit down and work things through with an individual student. Furthermore, the feedback from students in a lecture course is frequently delayed until the mid-term or final exam and then it is not very precise. In working with New Students, teaching becomes an everyday challenge in which the success of the teacher is measured by the success

of the learner. And so New Students will make new demands on teachers. Teachers will need to have a sophisticated grasp of the learning process and they will need to be skillful in diagnosis and prescription. Most important, they will need to get their satisfactions from helping students learn.

New Students will also have some profound effects on the educational system. Semesters and grades, as they are presently conceived, have done untold damage to New Students. Under the bind of the semester we have forced students with inadequate educational backgrounds to move at a pace that is too fast for them; when they fail to keep up, we label them failures by assigning them low grades. Not surprisingly, research shows that students moving through the school system, labeled "below-average" students, come to think of themselves as below-average people. I'll say more about grades and semesters and alternative solutions later. But I want now to turn to the probable impact of non-traditional learners on higher education.

Today's adult part-time students are, as a group, quite different from today's New Students. Yet in some strange way, their presence reinforces rather than neutralizes the directions of change already suggested. Most research on the characteristics of adult learners shows these students to be above average in motivation, educational background and ability, and socio-economic status. Adults who pursue further education in the face of competing demands for their money, time, and energy are, for the most part, the privileged rather than the underprivileged members of society. Teaching, in the sense in which I used the term in describing the diagnostic and prescriptive skills required for work with New Students, is not the critical element in working with non-traditional learners. Nevertheless, the need for individualization is just as great for non-traditional students as it is for New Students.

Adults enter the college classroom, not directly from a standard 12 years of schooling, but from a vast range of learning experiences on the job, in raising a family, through participation in community activities, through reading and television, through private lessons or independent study, through travel in foreign countries, and in general through an enormous variety of formal and informal learning activities. Not only is there great diversity of learning background among adult learners, but here is great variation in educational goals.

Faculty members working with non-traditional students will be called upon to think through what it is that education is supposed to do for people because their non-traditional learners will be consciously confronting that question. Once the goals are established, there is the necessity to develop a program of learning experiences that will accomplish the purposes of the student in pursuing education. Faculty members today are not often confronted directly with these larger questions about education. Unless they serve on a faculty committee to formulate the goals of the college or on the curriculum committee to develop a program of studies, they may spend most or all of their career directing their attention to cramming subject matter into the skulls of their students.

The term learning facilitator has been used in some programs for non-traditional students to describe a new faculty role. It suggests that there is a skilled job to be done in arranging a program of studies that will accomplish the goals of the learners. The term facilitator implies more knowledge and skill than is required of today's academic advisors. Learning alternatives are proliferating rapidly off-campus as well as on. Whereas yesterday's college graduates pursued a reasonably standardized pathway consisting of required and elective college courses, tomorrow's college graduate

may put together a program consisting of some independent study, some courses taken via TV or newspaper, some experiential learning on the job or in volunteer work, and possibly some tutorial work or travel experiences.

The real challenge that the non-traditionalists have tossed to the traditionalists, however, is a sleeper not fully comprehended, I think, by most educators. Non-traditionalists state quite explicitly that it should not matter when or where or from whom a student learned; the important thing is what he or she has learned. Were we to grant degrees on the goals attained rather than on the pathways traversed, the impact on education would be profound.

The implicit assumption of traditional education is that student learning is a direct function of the learning environment. If students are taught by credentialed faculty, and they meet the time and grade requirements of an accredited institution, then they can be certified as educated persons. The problem is that all of the measures ticked off in that definition of a college degree--faculty credentials, semesters of study, grades, and institutional accreditation--are very crude measures of education, linked to student learning outcomes only in the most remote and tenuous ways. There is no good evidence that present methods for credentialing, hiring, and promoting faculty members have any direct bearing on student learning. There is no good evidence that hours or semesters of exposure to learning stimuli bear any direct relationship to student achievement. Indeed, the entire grading procedure is testimony to our frank recognition that all students in a 3-credit-hour course do <u>not</u> learn equal amounts. But grading really doesn't solve the problem since there is no way to attach any real meaning to grades given by a variety of professors in a variety of courses at a variety of institutions. It is simply not possible to compare Professor Y's A in English literature at Podunk College with Professor X's A in solid-state physics at

Harvard. It is a demonstrated fact that if a nationally standardized test is used as the measure of student achievement in a given freshman level subject, some grade distributions will run the full gamut of A to F above the national median, whereas other distributions will show the prescribed bell-shaped curve with all students scoring below the national average. In short, Podunk's A may be Harvard's F. We attempt to accommodate our knowledge that grading standards differ greatly, even among accredited institutions, by evaluating students' grades in the light of our subjective judgments about the quality of the institution. But we have to admit that the quality of undergraduate learning is not usually the kingpin upon which institutional prestige depends.

In summary, there is a lot to be critical about in traditional measures of education. Starting with the definition of the degree as the number of credit hours accumulated, we acknowledge the inadequacy of that measure by applying the corrective device of the grading system, and we attempt to compensate for the incomparability of grades through making subjective judgments about instructional quality. Compensating for the inadequacies of one measure by piling equally inadequate corrections on top of it is not a reasonable way to address the problem. I'd be willing to bet that anyone who sets out seriously to find some better measures of learning will be able to do so. For starters, we might follow the prescription of the non-traditionalists who are suggesting that learning be measured as a quality of the learner rather than as a certification of the pathways followed. Let us see what such a system might look like.

The basic requisite for a rational crediting system is that people must collect educational credits for what they know. This implies that there may be numerous routes to attainment, and it also implies that certifying what a student has achieved is preferable to

certifying how well he has learned relative to his peers during an arbitrary time of exposure. As we look to a future involving lifelong learning for most of us, the notion of being able to move in and out of learning experiences, collecting educational credits as time and circumstances permit, has great appeal. Employers, for example, would be better served to know that their choice is between individuals with 80 and 120 units of mastered material rather than between individuals with A and C averages on an attempted 120 units. The proposed reform is also more equitable for individuals. The learner who has mastered 80 units has laid an adequate foundation upon which to build. If he wishes to compete for higher level jobs, he may return to school to gain more educational credits. Under present measures, the C student with a bachelor's degree simply lives with a mediocre learning experience. To the extent that the C average reflects learning inadequacies, he has a weak foundation upon which to build further education, and he has no chance to convince employers, who give credence to grades, that the C does not reflect his lifelong learning potential.

One model for the implementation of this proposal for variable credits already exists in the Keller Plan. The Keller Plan or PSI (Personalized System of Instruction) is a self-paced mastery learning system in which the work of the course is broken into 15 to 20 learning modules. The student moves at her own pace, mastering each module in turn. Ideally, there is no need for grades, since mastery (or learning to criterion) implies high level achievement for all students receiving credit. Differences in student learning are reflected in the number of modules completed. Whereas one student might master 18 units in three months, another might complete only 12. Although under the constraints of our present system, the student mastering 12 units might receive a C while the student completing 18 units receives an

A for 3 credit hours, it would make considerably more sense to permit variable credit, assigning 12 units or 18 units, depending on the amount of work completed. PSI has obvious advantages to New Students who benefit from cognitive mastery and from the affective satisfaction of doing something well. For somewhat different reasons, it serves non-traditional students well because it meets their needs for flexible scheduling and their capacity for independent study. It serves society well because it provides a direct measure of student knowledge and/or competencies.

A related step into a future in which learners collect educational credit for what they know is provided by the increasingly popular option of credit-by-examination. The CLEP tests (College Level Examination Program) provided nationally by the College Board, permit students to collect credits for what they know without regard to where or when or from whom they learned it. Credit-by-examination is now a commonly accepted practice. In 1975, almost 100,000 people showed up at some 900 test centers across the country to take one or more CLEP examinations in the expectation of receiving college credit from one of the 1800 American colleges and universities that recognize out-of-class learning through satisfactory performance on academic achievement tests.

Academic achievement tests are not the only way of demonstrating learning, however, and some people would like the reforms of the future to include measures of competency as well as measures of knowledge. Everywhere except in the academic world people are credited not solely for what they know, but also for how well they can apply or use their knowledge. As a matter of fact, even academe rewards its professors, not on tests of their knowledge, but on products that demonstrate the use of knowledge--research grants, publications, and, we hope, well-educated students. College credentials would be more

closely related to people's abilities to accomplish the work of society if they were geared to assessing the utilization rather than the mere possession of knowledge.

Alverno College is one college that has pioneered in the measurement of the competencies of a liberal arts education. One of their goals for a liberally educated woman is that the student be able to carry on intelligent adult conversation about world affairs. Instead of settling for an approximate measure of this capability by administering a test on current events, Alverno assigns a team of trained observers to evaluate the performance of a group of students engaged in a conversation about world events. Education already uses performance measures to certify skills such as typing, singing, and surgery, and the use of products or portfolios is common in fields such as architecture and fine arts. Non-traditional learners, in particular, are pressisng for more valid and more imaginative measures of their learning--learned in class as well as through other experiences. I predict that before the year 2000, colleges will respond to the demands for a new credentialing system for higher education. When it does, the implications for teaching and for the consideration of non-traditional alternatives in the locations and scheduling and methods of education will be dramatic.

The new learners, just by being different, have challenged many of the traditions of academe which are accepted more for their familiarity than for their validity. When faced with new perspectives we have to ask why things are as they are, and when our answers fail to satisfy, it is time to look for new solutions. The new learners are, by their very presence, contributing to the re-examination and responsive vitality of education.

PROFESSIONAL COMPETENCY AND SOCIETAL CREDENTIALING

Dr. Cyril O. Houle
University of Chicago

As a corollary to Dr. Cross's presentation, I want to shift both the pattern and the place of our thought away from the college and the university campus solely and focus the remarks that follows on one of our major clusters of products: the people whom we produce to go out into society to practice the professions of medicine, dentistry, architecture, law, the pastorate, and other fields.

I was a consultant for the TVA during its early days and a great deal of lore grew up during that time. There were not only stories about the moving of grave yards, which happen to be a speciality of the relocation projects of the TVA, but also about the moving of the farms and farmers. Not all of them are suitable or tellable, but one which is suitable for my purposes was about a farmer, Mr. Smith. The land clearance agent from the TVA came to see him and he said, "Mr. Smith, we have made a very careful appraisial of your farm and we're prepared to offer you $37,000 for it." This was in 1941 and Mr. Smith said, "Well, now I don't know, Jim Jones down the road there is getting $53,000. What's the difference?" The land clearing agent said, "It's clear what the difference is. His spread is a lot better than yours. He has a lot more invested." The farmer said, "Well, that may be true, but for lake bottom it ain't no better."

Thus, let us examine the lifetime patterns of some of our most distinguished alumni. In order to move you from 1941 to the present date and in keeping with the new spirit of the times, I would like to quote from the prophet Micah. The first verse of the second chapter in the New English Bible translation from the prophet Micah says, "Shame on those who lie in bed planning evil and wicked deeds, and rise at daybreak to do them,

knowing that they have the power." I think that this quotation is an apt beginning because most professionals feel that society is saying this to them, "Shame on those who lie in bed planning evil and wicked deeds, and rise at daybreak to do them, knowing that they have the power." All of us know that there has been a general loss of confidence in the established authorities and the established situations in American life; the Congress is at the lowest level, next above them are labor leaders, just above them are business leaders, and somewhere above them are professionals. We are well aware that this loss of confidence in the establishment constitutes a shift of the values assigned to many institutions and persons on whom we have traditionally put much faith.

I think that the vast majority of professional persons today sense somehow that evil forces are abroad in the land, that those forces are moving toward professionals in ways that are complex and hard to understand, and that they eventually either cost the professional person a great deal of money or bring him down--or both. It was only a dozen years ago that an issue of Daedalus dealing with foundations of professionalism in American life began with a clarion cry: "Everywhere in American today the professions are truimphant." How is it, that in twelve years this turnabout has come? That's a rhetorical question because most of us know the answer. We see the punitive things happening all the while, just as the professionals do. They encounter malpractice suits, not merely in medicine but now in a whole host of professions; there is a tightening of requirements concerning disbarment and other quasi-legal forms of removal from the company of the profession; there are stringent licensing requirements that are being put into effect; there are vocal demands for citizen participation on all of the boards of licensure and certification, something that was virtually unheard of twelve

years ago. All of these things are happening because society just doesn't trust the professions any more. Above all these things is the question of meaninful relicensure. One no longer has a credential which gives the right to practice medicine, law, architecture, engineering, dentistry or any of the other professions for life; instead, and increasingly, our states are enacting relicensure laws which require that one not merely send in an annual fee but also that one periodically be reexamined in the light of one's continuing competence.

On a grander scale we have seen in Watergate morality a real lowering of esteem for politics and the Bar; Judge Sirika has come to be a hero because he did the obvious, sensible, straightforward, principled thing that all lawyers know they should do. We have experienced the national discomforture of Vietnam, where the most highly trained and best equipped military professionals in the world found themselves hopelessly defeated by the peasants of the country. We have witnessed the collapse of a dam in the west and a skyscraper in Boston, in each of which the stature of engineering and architecture is diminished. We have felt the incapacity of the health professions to provide an adequate system of health care delivery for all of our perople. We have seen and heard of the inability of social workers to devise a truly equitable system of welfare that is not replete with abuses we all know to be evil. We have observed the widespread acceptance that the young people who leave our schools are ill-educated, the almost kneejerk reaction that recent graduates--particularly public school graduates--haven't been well educated. In our daily lives we constantly witness or hear about, not only the overtly evil and wicked deeds of which Micah spoke, but also slackness and idleness, obvious self interest, and greedily unthoughtful protection of the guild.

And so, both in the grand and in the daily intercourse of our lives, we have experienced a diminution of respect of the professions, and I think

all professionals know it. It has probably reached or is near to reaching a peak, and it may ebb away because the professions are doing a very great deal about it, some of which I'll note later. But the fact remains that we have a problem which I don't think will go away: the problem is how to provide for recurrent education throughout life, in significant ways, of all of the professionals who received their first education at our universities. We can't do without the professions; we can't conduct our lives or even live without them, and therefore we must turn our attention to assisting the professions in trying to see both what they can do to have their confidence maintained and be able to work collectively on the kinds of problems about which professionals ought to be concerned.

We have done a lot of easy and obvious things. We have agitated for relicensure to some success, and we certainly have provided multitudes of short courses, conferences, lecturers, and materials. I seldom go to a motel or hotel where I don't find some professional group meeting there for some purpose, under some auspices. Whe have devised all kinds of educational technology and trained the people to run it. We have set up telephone networks, television networks, video cassette networks and many other so-called delivery systems. We have invented the Continuing Education Unit as a way to cope with this problem. We have developed new kinds of tests of knowledge and confidence which have validity and reliability far beyond many of the traditional instruments with which the public is familiar.

I think all of these things are good and they are worthwhile first steps; however, the problem is far too great for them to be self-sufficient. So, for the last three years I have been engaging in a study of twenty well-recognized professions and three vocations which are just starting on the road to professionalism. This comparative study of these twenty-three

groups was designed to assess just how the processes of continuing education could be inserted meaningfully within the life patterns of each and to discuss what each could learn from the other. Each profession is unique, each has its own way of doing things, and each has its own language almost by definition. And yet, if one studies them comparatively, one can find a great many things that will be of help. I hope my book on this subject, which has been supported by the Educational Testing Service, will be available in the spring of 1978. In the interim, the remainder of this paper presents two or three of the ideas that may reach fruition in the book.

It does seem to be clear that education is not the only way by which the professions can fundamentally police themselves and maintain themselves. There are plenty of others: the vigilant self-policing of the professions themselves, regulatory legislation, the judgment of the courts, and the inspiration of personal leadership. Formal education can't do it all. However, it can do a great deal, and much of the remainder can't be done without education; thus, it is my thesis that we need really to consider education's role in a much broader way than we have ever thought about doing.

I hope that in addressing this issue we will not spend any time on the question, "What is a profession?" Our guiding principle, enunciated in the early 1960's by Everette C. Hughes, who is probably the most distinguished Sociological Analyst of the professions, should be this sentence: "In my own studies, I passed from the false question, 'Is this occupation a profession?' to the more fundamental one, 'What are the circumstances in which people in an occupation attempt to turn it into a profession and themselves into professional people?'" And so, I think we can get a concept of a vocation, if you wish, which is movement constantly toward the stature, the acceptance, and the self-belief of professionalism. Thus, I think it is useful to talk about the professionalizing process and to use the term

"profession," as a shorthand work signifying those which have gone farther along the pathways of professionalization than others.

I would like to suggest, therefore, that anything I say is as relevant to the new and emerging professions as it is to the old and well-established ones. In keeping with the theme of this conference, "Learning and the Learners," the comments that follow have to do with three of the chief modes of learning and their applicability to the professions.

The three modes of learning are the mode of inquiry, the mode of ability, and the mode of performance. By the mode of inquiry I mean the process of creating and establishing some idea, technique, policy, or strategy of action. This is a process of discovery, a process of development. It can be used in an entirely educative fashion as when we have discussion and encounter groups, seminars, clinics, guided experiences, field trips, and other kinds of things in a deliberate effort to help people change themselves. However, the exact nature of the changes can never be predicted, because it is impossible to predict the precise goal at which one hopes to arrive; the purpose of inquiry is to arrive at an unforseen goal. The great exponent of the mode of inquiry is John Dewey, and the best single book is his book, Experience in Education.

More frequently in the mode of inquiry, learning is the by-product (though sometimes an intended by-product) of efforts that are directed primarily at establishing policy, seeking consensus, working out compromises, and projecting plans. An example might be a task force trying to reexamine the meaning of academic credit in modern American life. Such a group would engage in a process of which it could not predict the end. In such a process, the members of the group would be learning, they may try to "educate" one another, or might even bring in specialists to address certain topics, but if anyone tried to be didactic or force an outcome he would at once violate the mode of

inquiry. As Dewey said, the basis of success for a learning experience--whether it has been educative or, in his words, "miseducative"--can only be determined after the experience is over. The criteria are not even known. We engage in a process of inquiry, come to an entirely different destination than the one we had expected, and suddenly realize that we have achieved something that we hadn't anticipated.

Now, the second mode of learning is one about which educators often talk: the mode of ability. This is the way by which learners acquire fairly well-established skills, knowledge, or sensitivities. Most people think of this mode as the only form of education. This mode is the one that we use in established educational institutions for the most part. The faculty knows what the students should learn, and consequently the process is within the medium of the personalities of the students that we're trying to reach to convey established abilities, skills, knowledge, sensitivities. One can use the mode of ability; within the mode of ability, one can use the mode of inquiry. Thus it is that skillful chemistry teachers very often require their students to determine the component elements of the unknown even though the professor knows what the unknown is. Still, it's a process of inquiry. Or in the professional field, the physician requires the medical student to come to the correct diagnosis (or at least what the professor believes to be the correct diagnosis) in a nondidactic fashion. But fundamentally, there is always the authority which stands behind it, and that is always the case in the mode of ability. One usually measures the degree of success in the mode of ability by one or more of three means. The first is by mere attendance. In other words, we say that if a person has gone to college and has gotten through he has had a college education. In the case of a continuing education unit we say a person has experienced ten hours of carefully devised education and gets one CEU. Consequently, the first is to measure the extent

of participation and the kind of participation, making the assumption that this will bring about results that will be desirable. The second means is by the method of constructing some form of test. Often a pencil and paper test, often very highly skilled, fully developed in its form and written by people who know it affectively. The third means is demonstration of the ability to perform competently. We've heard a great deal recently about competency-based instruction as a measure of the ability to do things. These three merge into one another but I think it's fair to say that, singly or in combination, these are the three classic forms within the mode of ability. Competency-based instruction is the easiest to use, of course, when it has to do with some kind of skill, either a physical skill, or the writing of a composition, or some of the other kinds of things familiar to educators. It's harder to deal with when we deal with knowledge, sensitivity, or insight; but still, competency-based instruction is in vogue today among those who are working essentially in what I have called the mode of ability.

The third mode, the mode of performance, is quite different from the other two, although it overlaps them. Performance is the internalization of an idea or the habitual use of a practice so that it becomes a part of the way by which a person thinks about and performs his or her work. Because people can have a competence and never use it, competency-based instruction may not necessarily have a better relationship to performance than attendance or pencil and paper tests have with the mode of performance that we teach in our pre-service years of a profession--by drill, by close supervision, by clinical presentation, and by long continued demonstration by the professors who serve as role-models for their students. So within our curricula which serve to prepare lawyers, or architects, or others, we already attempt to inculcate the habitual use of a practice or the integral use of a theory or body of knowledge. I hope you will understand that performance-based

learning is different from compentency-based learning because in the former the person uses it autonomously: it becomes a part of his practice, his thought, and his values.

During the years of practice, when a person has left the college or university and has moved out into the field, one can also inculcate performance by the formal use of the other modes of learning. We are now desperately trying to do that by all kinds of work, but it also must be reinforced by a system of rewards and punishments which require individuals and groups to maintain and improve their ability to avoid obsolescence. Consequently, we have to move a good deal of the instruction out of the university and into the work place--whether that be a hospital, a school system, a library, or armed services hierarchy, an industry, or something else. Somehow, we must find the ways as universities which have bodies of knowledge in all professional fields, to collaborate effectively with external agencies, or I desperately fear that they will leave us and set up their own separate institutional ways of teaching. The university will forever have lost its opportunity to serve this group of people in what I think is really the only important way of serving them: to improve their performance. The evaluation of this mode of learning, the mode of performance, is essentially judged by one's peers, by supervisors, or by external examiners. In some cases, there are data which one can collect in order to determine whether or not people use systems continuously. Essentially, what we are after when we deal with the mode of performance is not to arrive at new insights (that's the mode of inquiry), not to convey established knowledge (that's the mode of ability), but to be sure that within the practice and the thought and the feelings of the people whom we teach, these things are actually performed.

I am suggesting a very hard and a very rigorous kind of thing. Let me just apply it briefly to the professions. What I have said is as true

of any other program of instruction as it is to education in the professions, but let me apply it to them. In the mode of inquiry, we must find ways, or the professions must find the ways, of thinking very seriously about their own systems; in fact, they are doing this. We find, for example, that while medical practice continues fairly steadily in terms of the long span of years, the realistically predominant value patterns of medical practice change. Thus, in the last four decades there have been four prevailing value patterns in the field of medicine. The first, of course, was general practice. The second was the predominance of specialization, and the physicians and medical schools spent most of their attention building up the medical specialities. The third was the predominance of research, in which our medical schools and our abler medical practioners were charged to do research and advance the knowledge of medicine. Today in the '70's, it is my opinion that the prevailing pattern is community health. In other words, if you were to take the Strong-Campbell Vocational Preference Test, you would find that currently enrolled medical students are more like the students of 1938 than they are like the students in medical schools between 1940-1970: in some sense, community health has the same kind of values that the general practice of medicine used to have before we started off on the field of specialization.

The medical profession has to think this through. It has to use the mode of inquiry. It has to develop these ideas. Moreover, there are a number of other professions which have been spending a good deal of time on the mode of inquiry both nationally and in the respective states. I think particularly of pharmacy, where the theory in the universities among academic pharmacists is so completely different from the practice of pharmacy in the field that I have in my life seen only one pharmacy which practiced the way professors of pharmacy almost universally agree pharmacy should be practiced.

In some of our medical schools, under the impulse of the community health, the first task of a medical student in the first week of the freshman year is to get acquainted with a three generation family in the slums. It's his or her job to get out into the community and then for four years to help this three generation family on a continuing basis. Never to treat them (for, of course, the medical student cannot do that), but to advise them and bring them to the attention of those who can treat them. In similar ways our pre-service curricula are being changed in many of the professional schools. Indeed, very profound changes are occurring, and, as we deal with credentialing in our society, they need to be tested by the accreditation procedures to get approval for such pioneering programs in the pre-service years, and to open up the accreditation system to allow this.

Therefore, the chief task of continuing professional education today lies in the establishment of a growing and continuing confidence by the people who are engaged in the field. We must use the mode of performance which sociologists call change theory or planned change. We look at the hospital, at the engineering firm, at the industrial establishment, at the military, or somewhere else, and we try to see how we can really change the performance by taking a level of performance which has been frozen at one level for a long period of time and move it upwards, so that a higher level of performance is achieved. Of course, the sociological literature on the theory of countervailing forces indicates that as one attempts to improve performance many forces tend to hold it back. In all of these improvement efforts, however, education is a constant force and if we think creatively, universities will find ways by which they can work intelligently with people, either in the workplace or by bringing those people to the campus to try to find new and interesting and significant ways of increasing their performance

when they go back on the job. And here we have to monitor performance and so we have developed techniques of supervision such as peer review and self discipline, and finally--if all else fails--the courts.

What I have laid out is an impossible goal, as are all goals ultimately so; but what I really want to suggest is that if one is going to think realistically about professionalizing occupations which are constantly at work at their own improvement, that education (and, specifically, higher education) has a very important place within this task. I have tried to suggest that we really must not concentrate entirely on one mode of learning and one mode of teaching, but instead realize that there are three modes and that they operate on somewhat different principles. The measurement of participation is different from test-taking, it in turn is different from compentency-based measures, and all of them are different from performance-based measures. Ultimately, all of us are concerned only with performance: we really don't care how much our doctor knows; we just want him to make us well. The same thing is true about any other profession. And so I trust that we will think about this concept of truly lifelong continuing professional education not as a mere matter of relicensure or the offering of short courses and conferences or any other simplistic response; rather, we need to look at it in its full complexity. This is a very important sort of mission that I think the universities must accept as they strive to grow from being what Ernest Boyer has called "youth ghettos." The chief task lies, I think, with the professional schools. It also lies very importantly with the centers of Continuing Education and with their staffs who ought to be working in close collaboration with the professional schools. It also lies, of course, with the people who teach in the basic humanities, social sciences, and natural sciences. As long ago as Frances Bacon, it was realized that all of the practical details of the professions ultimately rest upon the basic

foundation of knowledge which people have who go into the profession. I'm sorry if I have painted too large a picture, but in the course of three years study of this problem I have learned the truth of the old saying, "there's no subject, however complex, which if studied with patience and diligence will not prove to be more complex."

DIVERSITY OF RESPONSE AND MAINTENANCE OF QUALITY IN HIGHER EDUCATION

Dr. Morris T. Keeton
Antioch College

I. Introduction

This talk makes eight points related to a theme and asks two questions. (A commercial is thrown in to accomodate the listeners' habit of having a break for beer and snack during live broadcasts.)

The theme from which this talk proceeds is this: High quality in a product or a service is not only compatible with diversity among products and services offered; high quality requires the offering of diverse products and services in a society with complex and diverse needs. This theme is also Point one of the eight.

I assume that all of you concur with this theme and find it a familiar working assumption for your approach to the questions I will pose.

Let me, nevertheless, illustrate the theme to keep it vividly in mind. If you want a serviceable beach buggy, you might look for a four-wheel drive Jeep. If you want inexpensively functioning, fuel-saving commuter transportation, you might look for a subcompact or compact car. If you want to impress the public and travel in great comfort in maximum security, you might want a sleek black luxury-appointed sedan, but you would not drive the luxury car along the beach or chauffeur the foreign minister in the Jeep or choose the beach buggy as the preferred commuting vehicle.

If you are so unfortunate as to have need of specialized dental services, similar considerations apply to your choice of orthodontist,

dental surgeon, endodontist, or general dental practitioner. The theme applies as well to the qualitative merits of diets, whether salt-free, fat-free, additive-free, or however else specified in our diet-rich world. Educational diets are likewise no exception.

Given this theme, I have been asked to address two questions:

A. How can one define and determine what specific variety of offerings (services) is most needed from institutions of higher education today?

B. How can responsible people assume that the quality of services offered in such a diverse mix of offerings is and will continue to be adequate?

II. Purpose and Quality

Our theme implies that purpose is the key to the meaning of "quality" and to the evaluation of the quality of offerings and their delivery.

Why does one choose a four-wheel drive station wagon? an endodontist? a fat-free diet? or a bicultural Spanish-and-English speaking program in human services organizational development? One does so because of the particular purpose and priority which is determinative for this particular choice. If a person is to act as intelligently in choosing educational services as is wise or prudent in the choosing of cars and diets, one has a priority of purpose in that act that is judged to be best met by this alternative.

The second point follows these considerations. An essential step toward the achievement of high quality amid a diversity of educational offerings is the clear and appropriate choice and specifications of purposes and objectives for application to the available or potential educational options.

III. Choosing Well as to Purpose

My third point is to name two problems in the choosing of educational purposes by institutions of higher education, and my fourth and fifth points suggest an approach to coping with those two problems.

The two problems are: (A) to choose wisely among the options as to achievable purpose, and (B) to define clearly and precisely what you choose to offer. Let me illustrate both the difference between these two aspects of choosing and the problems which arise when the choices are poorly made.

The difference between choosing wisely and defining clearly what is chosen can be seen in the differences among the glutton, the sucker, and the lost or strayed pilgrim.

The very name "glutton" labels him as having made an unwise choice. It is not that his choice is unclear--quite the contrary. He has clearly chosen to subordinate greater and more important things to the satisfaction of his appetite or to some other compulsion that expresses itself in the need to overeat and to drink intemperately. Some of our universities are clearly affected by gluttonly.

The sucker, on the other hand, may be confused on either of the two counts. He may have had a good choice of purpose but fallen victim to the blandishments of a fast talker or the temptations of an opportune circumstance or simply his own muddleheadedness, with the result that, lacking clarity about precisely what he had meant by his choice, he is led astray. Or he may have self-consciously chosen an ill-considered enterprise and purpose. In either case, he ends up "holding the bag," which is usually empty. This fate is even more common in higher education than gluttony.

The good pilgrim, we assume, has, at least within his religious or philosophical outlook, made a righteous and faithful choice. As a pilgrim

lost or strayed, however, he was not clear enough about that purpose to keep on track. It is not always easy to distinguish between good pilgrims and suckers in higher education, but charity impels us to accord some of our colleagues (including ourselves) the benefit of this doubt.

Let me offer some less amusing examples which may be more to the point.

One of my first-year college advisees some years ago insisted at our initial program planning session that she would major in biology en route to medical school to become a physician. Her aptitude scores and her Strong Vocational Interest Inventory suggested that she was better suited to a career in the arts. I acceded to her insistence and supported her request for chemistry, technical physics, calculus and a first cooperative job placement in a Chicago hospital as a surgical ward attendant. The cause of her choice emerged after her disillusioned return from the job and first term grades: her father had wanted to be a doctor and could not be; he had, in the benighted state of sexist bias of that era, wanted a son to fulfill his own ambition; begetting an only daughter, but a faithful one, instead, he had displaced his wish upon her. The result was a poor choice of educational purpose on her part, and the further result was a poor quality of program service, at least poor except for its utility in rectifying that basic mistake.

A second example is familiar to you--the bright but bookish and not well adjusted young man who graduated with honors and chose a highly competitive graduate school which continued to shield him from a maturing relationship to either peers or the larger society. The resultant dropout was blamed on him, not Harvard; but both his advisers and the faculty who admitted him contributed to his having a qualitatively disastrous educational service.

To turn to examples drawn from institutional planning, I am reminded of the initial mismatch between the purpose of Antioch Columbia (in Maryland) on one hand and its setting and clientele on the other hand. The institution's purpose was clearly defined but not well understood or accepted by its initial implementers. It began with young, idealistic, inexperienced, largely bright urban students when more experienced and seasoned people would have coped better with and benefitted more from, its environment, educational design, and delivery system. Eventually the mismatch was corrected; but the problem was more in grasping the clarity of implications of the purpose than in any other of the failures of planning and administration.

A final example on this point has to do with how to avoid this inadequate grasp of, and choice of, purpose. Defining purpose well and achieving consensus in purpose with clarity seems to me among the most widespread problems leading to poor quality in program performance. At the Institute of Open Education in Cambridge, Massachusetts, the co-directors have found a way to "get the purpose and its implications clear." They combine a careful write-up of program aims and design, a required viewing of a video-tape demonstartion of the phases of the program from beginning to end, visits to the program by prospective students, and a half-day required workshop in which the promising applicant interacts with alumni, faculty, and fellow applicants in the kind of experience in self-definition the program requires. The dropout rate is negligible.

The Prospectuses being funded this year by the Fund for Improvement of Postsecondary Education are another example of an effort to enable institution and student to have a meeting of minds on purpose before commitment is made. The Barat College Prospectus edited by Theodore Marchese is a good model of this effort.

A. How can institutions do better in choosing well what to offer, for whom, and with what purpose? My fourth point is that, as these examples suggest, it is generally advisable to use a combination of strategies employed overtime in a pattern that is self-correcting. Market surveys, policy studies, and master plans can all contribute to the weeding out of inappropriate choices as to programs to continue or to initiate, but the field test or trial balloon may prove them all mistaken.

B. How can the choice, as it is make, be well defined? Let me mention four obstacles to this effort by way of stating my fifth point in answer to this question.

1. Many of us really want to "waffle" when the time comes to choose; that is, we would like to avoid choosing and to leave the purpose ambiguous, somewhat uncertain, or clearly indefinite. In this way we may elicit more response than a clearer purpose and a surer decision would get.

2. It is hard to state a purpose clearly. To verify this point, write down what you wish the terms of a fairly simple agreement to be, and ask your lawyer to put it in legally precise language. (Be sure his service is offered pro bono publices.)

In my experience as an institutional evaluator for the North Central Association of Schools and Colleges, the most common failing of instituions in the self-study is that of inadequate clarification of their own purpose.

3. To focus clearly and to stay focussed requires great energy self-consciously applied to that task. Few of us do it. Look closely at almost any college instructor's performance in this respect on course objectives. Students are even more notorious for straying from focus.

4. To have effectively clear purpose-in-action, people engaged in education and learning must have at least a congruence of purpose and

preferably a convergence or sharing of purpose. Otherwise, everyone's purposes get "fuzzed up" in the doing. Just recently I took part in a workshop which the leaders meant to be for helping faculty become more competent assessors of non-classroom learning, but which the majority of trainees were attending for the purpose of learning how to get other faculty to adopt a non-classroom learning program and to agree to a good procedure for assessing its outcomes.

The fifth point may now be stated in this way: To achieve clarity of purpose in an educational program requires acuity in conception, the will and energy to maintain focus, a variety of ways to keep checking overtime, and external help in understanding what is going on.

IV. The Fitting of Design to Purpose

Many of our catalogs declare that attendance at our institutions will cause students to become mature, effective citizens. (Of late, with the use of the consumer protection legislation, college editors have been working overtime to preserve the intimations of this message without quite saying it.) At the same time our educational design normally includes:

> faculty who repudiate this responsibility and deny their capability to contribute reliably to its fulfillment,
>
> primary reliance upon lecturing without experimental tryout of ideas, and
>
> a protective-directive environment (the late George Stern's language) unsuited to the growth of either maturity or effective citizenship.

My sixth point is that if institutions of higher education are to achieve reasonable quality in their diverse programs, the program design must heed the major determinants as to whether the learning outcomes fulfill the purpose; and these determinants include factors which are commonly

neglected or underemphasized in the planning and conduct of such programs. These questions get at the kind of factors to which I refer:

1. What are the major sources of student motivation, and the major deterrents to it, in this program's design?
2. What are the dominant characteristics of the environment and its "press" upon learners? How do they support or impede the purposes of the program?
3. What account is taken in the program design of the differing needs for information assimilation and experiential learning (James Coleman's terms) on the part of the learners?
4. What variety of stimuli and resources are employed to provoke inquiry, to raise genuine doubting about assumptions and orientation of the learner on the subject matter of the program, and to challenge the learner to substantial questioning?

Often those who conduct a course of study or a program of studies develop a preoccupation with its details and miss these major determinants of outcome. I was once obliged in a teaching and learning experiment to cut my aggregate time spent on a course by 50% at the same time that the course enrollment almost quadrupled. That experience forces a person to ask what really matters about the design of the course and about its effects upon learning.

V. Delivering Program According to Design

Finally, the quality of our programs as actually experienced by learners depend upon their being carried out according to the specifications of the program design. In saying this, I realize at once how it is for courses and programs to be well enough designed and carried out for anyone to determine whether this criterion is met. I also acknowledge that it may sometimes be fortunate that courses are not delivered as planned.

Without attempting even a sketchy treatment of the multitudinous problems of good performance in teaching, let me come at once to the point (my seventh) that bears on the questions of this talk.

A good system of quality control will provide for periodic evaluation of the actual course or program as delivered. Such monitoring, evaluating, or auditing will ask:

> Are the purposes clear and well chosen?
> Is the design thought out clearly and well-adapted to its purposes, the resources, the learners, and the setting?
> Is the conduct of the program in accordance with the design specifications and of high merits in its components?
> Is the result one that approximates an optimal rather than a minimal achievement on the goals?

VI. Few institutions or programs, if any, can sustain high quality among diverse offerings without significant internal and external support for that objective. Many of the provisions in society for the external suports are focussed upon standards of minimum acceptable performance, and these efforts--in regional accreditation of institutions, in state coordination or control of programs, and in such controls as those of the Veterans Administration in program approval--apply these minimum standards in ways that work against best practice; for example, by the insistence upon proportions of class time effort that are pedagogically wasteful or by seeking to force faculties to use letter grades when the faculty has judged that practice counterproductive in its context. In systems of institutions, private or public, a support capability for improving program quality may be helpful. For some years my own primary responsibility within Antioch College, which is now a system of six campuses and of their component centers, has been the evaluation of quality of programs and the support of efforts to improve them. The fear of accreditors and of system officers, however, can work against candor and collaborative inquiry as to how such improvements can best be made. As one

measure to alleviate those fears, the evaluators may, when applicable, announce in advance that their examination will be used only for formative purposes.

Voluntary associations can be helpful aids to the effort to improve programs. American higher education has spawned many of them. One to which I intend to give major time in the next few years--and here is the break for a commercial--is CAEL, the Council for Advancement of Experiential Learning. Its purpose is directed precisely toward the concern of your conference with diverse learners and their needs. Its focus will be upon institutions' maturing their plans for improving the design and conduct of experientially enriched programs and for improving the assessment of their educational outcomes.

Whatever supports are sought, my last point is that each institution should adopt a program of quality control, using the best help it can get, both internally and externally, to apply the principles here suggested.

VII. Conclusion

In many cultures it has been thought that the quest for excellence must be reserved for an elite few. A source of strength and enrichment of American society has been its ever growing conviction that talent is diverse and widely distributed and that excellence should be encouraged in as many of these people as can be enabled to fulfill it. The concern of this conference with the maintenance of quality in higher education is a fresh expression of this important conviction. To find new means of giving it effect is an agenda with the promise and the difficulty worthy of our best effort.

ISSUES AND ANSWERS

Presiding: Dr. Milton Phillips

Panel: Dr. K. Patricia Cross
Dr. Cyril O. Houle
Dr. Morris T. Keeton

Questions Presented By:

Dean Edell Hearn
Dean Everett Witherspoon
Dean Bill Coffield

I. Dean Hearn's question to Dr. Houle

It was noted that you admonished the group very early in your comments yesterday to avoid spending any time talking about identifying a profession. The question is, "Why did you do that?" and related to that, "Is it not important to be able to identify what a profession is, to know what the criteria are if you are to move into the direction of becoming more professional"?

Dr. Houle's response to Question I

There are two reasons I admonished (if that's the right word) the groups. The first is that for a half-century people have been struggling with the question of a kind of static definition of what a profession is, and so far no consensus has been reached. Consequently, it seems a rather futile task unless one can really begin at some significantly new place, which is as yet undiscerned. It is as if we are waiting for the Marines to ride up from some as yet undisclosed location in order to bring the answer.

The reason I suggested that we consider the movement toward professionalizing is that we can then look at the dynamics of the operation. We all know that in public esteem certain groups of vocations stand higher than others: they deal with more theoretical subject matter, they deal with more crucial kinds

of problems, and that sort of thing. But getting a rank order is virtually impossible; therefore, studying the whole question of the professionalization process can help people to know how to respond to impulses toward professionalization. If we try to set some sort of bar and say the ones above the bar are professions and the ones below the bar are not, we achieve no useful purpose; we merely gratify some and offend others. We need to see the dynamics of what people can do, and to that end, I have tried to identify 14 criteria that seem to be general to the professions and try to see how those 14 criteria are being sought. I can't do that if I deal with the static conception of a profession. I have to deal with it in terms of the dynamic conception of professionalization.

II. Dean Witherspoon's question to Dr. Houle

You mentioned yesterday in your presentation three modes of learning. In most instances faculty members are more interested in the inquiry mode, the professions are interested in the ability, and society is interested in performance. How do you maintain a proper balance?

Dr. Houle's response to Question II

I don't accept your premise. I think for all practical purposes faculties are more concerned with the mode of ability than they are with the mode of inquiry. They may use inquiry but it's always within the framework that the faculty member may use it because he or she has been through this process and knows the answers. I know a law professor who appears to have been working in the mode of inquiry through the same set of cases for 25 years, always studying with the students, always seeming to arrive at a fresh conclusion. So if you looked at him at any given time it might seem that he was using the mode of inquiry; actually, however, he knows perfectly well

what the law is and helps people to come to it. I think the dominant conception of most faculty members is the mode of ability, however, they might (like the law professor) disguise it.

To get to the heart of your question and away from your assumption, I think all three have to be used simultaneously and in terms of particular situations. That is, there was a time I used pharmacy as an example, when the leaders of the profession were trying to decide what pharmacy was. There they had to use the mode of inquiry. There still isn't substantial agreement, so that mode is still continuing. Meanwhile, their task now has to do with the mode of ability (to teach pharmacists to know how to do what they are to do) and also the mode of performance (to get them to do it). One cannot really separate things: they spill over into one another, and a professionalizing process needs to move through this constantly, even though it may use one mode when it seems to be using another.

Dr. Keeton's response to Question II

I wouldn't trust either the teachers or the professionals to get the balance. This is a very hard question. It seems to me that we should try to strengthen the atmosphere of the learning synthesis which would tend to give more weight to get the appropriate balance of these factors.

III. Dean Coffield's question to Dr. Houle

You made the comment last night that considerable work has been done successfully in the measurement of performance. Would you comment further on this, especially as it relates to the measurement of performance in teacher education?

Dr. Houle's response to Question III

As I said yesterday, the mode of performance is largely measured in the workplace. Professionals tend to work in five different settings: (1) entrepreneurial, as with an independent physicial or dentist working in his office; (2) collectively, as in schools or hospitals or social work agencies. (3) In a hierarchy, as in the case of the military; (4) in adjunct positions, where people work in institutions with purposes different from the professionals, as when a lawyer works for a manufacturing concern or a doctor works for the military; (5) in facilitative positions, as where people work in boards of control, or legislative groups, or in other things that help the professions along.

Thus, one has to consider the situation in the work place of the professional before one can really think about measuring performance. In a teaching hospital, for example, there is usually a pathology clinic, and once a week the pathologists report on their dissection of the corpses of the previous week and give the purportedly correct diagnosis of why patients have died. The physicians who may have diagnosed those patients as having completely different diseases have to sit there and listen to this and have all of their colleagues know. This is a fairly gripping form of measurement of performance, but it does not entirely illustrate the case. In collective situations, hierarchical situations, and adjunct situations one has either this kind of peer relationship or supervision which permits this sort of a measurement. But much of the work which has been done in this field has been done under the term, "change theory," which will be familiar to all business administration as well as sociological inquirors. In the pre-service curriculum one can also measure performance to some extent. In teacher education, the place to measure performance is in practice teaching. In

actual work one must look to see what the individual is doing in the work place, one must set monitorial devices, and one must be aware of the role of the consumer. In the latter, one has to look at the attitude of the consumer as it's reflected in many ways, including malpractice suits; in the former instances one has to look at supervision and at peer performance. Thus in industry, for example, assessors have levels of productivity that serve as benchmarks from which one can assess actual productivity. This tends to be very difficult in professions and somewhat easier in production. But we are gradually moving toward this, and my chief hope is that we in colleges and universities will not leave the whole thing to the workplace; rather, that we will find ways of collaborating, assisting, and effectively relating ourselves to the measures of performance. Similarly, because measures of confidency simply show that a person can do a thing or thinks or feels a thing, it is imperative that we move beyond this level alone, since in the professions performance is everything.

Dr. Cross's response to Question III

Many people are aware that college level evaluation of teaching has become a big thing and a lot of people do not believe that it is possible to evaluate teaching as much as I think the research shows it is possible to evaluate. For instance, there tends to be a very high agreement on who are the good teachers among the administrators, among the faculty peers, and among students. They all tend to pick out the same people as good teachers and poor teachers. The only group that does not correlate at all with the other three are teachers themselves. In other words, there seems to be very little insight on the part of individual teachers, and this leads to the problem of people thinking there is no reward for good teaching. Much

more severe, are people who think they are good teachers, who are not preceived that way by others, and who are therefore passed by in promotion. And yet the survey from the University of Nebraska I did last year indicated over two-thirds of the faculty agree with the statement that there is no common agreement on what constitutes good teaching.

Dr. Keeton's response to Question III

I would just like to underline one point about the need to observe the teacher teaching in order to judge the teaching. Many state boards of education have gone to requirements and competency assessments as the bases of certification for teachers. But many have discovered that in trying to judge compentencies instead of observing the teacher teaching what they are doing is accepting proxy measures (such as what a teacher says he or she will do when confronted with a given situation in the classroom). That's a lousy method.

Dr. Houle's response to Question III

In general, we really do not know how things relate to actual performances. Intuitively we feel that one is lousy and another is not depending upon our particular situation at a college. We have to examine performance somewhat better than we have in the past.

IV. Dr. Phillip's question to Dr. Houle

Those of us who work in Continuing Education with parttime learners often are asked whether we are talking about a special kind of teaching, a special kind of student, or a general kind of teaching that is applicable both to the traditional young student and the new students. Often our professors

have said, "That's not for me, I don't teach those kind of people." Are we talking about a special kind of teaching or a special kind of client?

Dr. Houle's response to Question IV

Our real problem is that in our youth-centered education that we have used in the past we have tended to concentrate on things that usually stress teaching ability or mastery. I think that's a mode that can be used throughout life and in fact I think any of them can be used throughout life in any situation.

V. Dean Hearn's question to Dr. Cross

Dr. Cross, more specifically address yourself to how you define mastery and wouldn't different individuals, schools, etc., define it differently, or are we to arrive at a universal definition?

Dr. Cross's response to Question V

No, I would hope not a universal definition. I think mastery implies that there is some pre-set criterion, and that everybody is aware of what will constitute mastery. As we have it now, neither the student nor the teacher has any clear idea when the class begins of what constitutes a performance except that it is the best in that particular class. The more technical term, I suppose, for mastery would be a pre-set criterion level. I would hope that this is left to the professionals and that we would not need to establish any sort of national standard as to what constitutes mastery. The point is that if there is a criterion, then any faculty member or any teacher can clearly show what that is. That is, one would certify that the student is able to do certain things or does know certain things. Then, if one is called upon to say what twelve units of credit mean in that instance, one

could fairly clearly define what it means. It's fairer, not only in the final analysis of what has been accomplished but also in terms of helping the student to know what the general directives are. It's related both to the technical terms of criterion learning and also to objectives in learning.

Dr. Keeton's response to Question V

In the study we were doing on critical thinking skills there were 24 sub-skills being worked on, each of which had patterned exercises to develop competence. We were seeking for each student to do excercises in that matter until he or she had reached a competence of better than 85%.

VI. Dean Witherspoon's question to Dr. Cross

One of the groups was concerned about the time factor in your concept. The question is, "Should time be important in achieving course objectives?"

Dr. Cross's response to Question VI

Time is important in the sense that it would help the individual learner reach the objectives or the criterion. The question I usually get when I talk about time in this sense is "OK, so the slow learner still takes a longer time to learn; therefore, they are still perpetually behind. Just like the 'C' learner is behind the 'A' learner." I think that's quite true. I don't think in our school system, knowing that there are individual differences in learning rates, I would wish to think in terms other than of ultimate capacities. It is more important to learn what one learns well, than it is to learn as much as one can in a given period of time. So it is a question of what are the alternatives and what are the trade-offs. If I had to choose between whether I wanted to do something well or do it in a given amount of

time or whether I wanted that from my students its fairly clear, I think, where I would come down as an educator. Now, as an administrator I think we have put an awful burden on students because it is to our administrative convenience to have measurable units such as semesters or something of the sort. I'm afraid that that has usurped the pedagogical sense of what it is we're trying to do, which is to educate students.

Dr. Keeton's response to Question VI

There is another kind of practical problem I have run into when you get students trying to master certain skills, and if you were able to think how long it took to get mastery on a given skill you might have them falling into 20 different groups if you use 15 minute intervals as your measurement. How do you manage as a manager or facilitator of people's effort in mastery when they are going in different cycles? A solution can be found. You can set up a laboratory with an assistant to which people come for individual assistance. You also set it up so that progress of the fastest one is not impeded while the others are coming along. I used to use lectures for stimulus, believe it or not, and certain lectures could't be given until everyone reached a mastery point. Those simply are the kind of managerial problems that all your deans have.

Dr. Cross's response to Question VI

I think this helps the students who are ahead in class not only to solidify their own learning but also to help those who are one or two units behind. And I have seen this work very successfully, as a matter of fact. I think it does more for the tutor than the student. There is a college, Grand Valley State College in Michigan, which is a public four-year institution

with several thousand students that has no such thing as semesters. They operate completely on modular learning. The students may start at any time, finish at any time, graduate at any time, and so forth. By deft use of computerization, they accomplished a very complicated task, indeed, just to keep track of all this individualization.

VII. Dean Coffield's question to Dr. Keeton

Would you comment further on Coleman's research on learning?

Dr. Keeton's response to Question VII

One of the pieces of research James Coleman has done had to do with the learning tactics of students in gaming, and in that work he derived empirically the conclusion that essentially there was a difference in the sequence of steps employed in what he called experiential learning. In the traditional pattern, the students had the abstraction first, they then had to learn to recognize the instance of the abstraction, they then had to learn how the abstraction might be applied in an instance or how it might be adapted in a different kind of an instance. The final step in the business was being able to apply the abstraction to essentially new kinds of instances beyond the kinds from which the abstraction was originally derived. In the experiential learning pattern as he had it, students started with the action, not having a theory to govern the classic cases, and found an answer by a non-abstract trial and error process.

At first they used that without having reached the generalization about it. This might be analagous to a successful gambler who not only can't explain his theory of gambling, but who also gives an explanation that is manifestly not descriptive of the way he is handling his bets; nevertheless, he may well

be a more successful bettor than somebody who has a nice neat theory. If a teacher were to confront him with the difference between what he says and what he does, he may ultimately derive a theory that would be explanatory of what he does. The research suggests that some people work more easily in one of these modes than the other and that a mixture of the strategies may be more appropriate to many instances than a focus upon one or another. With elementary school children, for instance, before they have developed their verbal skills very far, or their pool of theory, the experiential learning mode may be more helpful. Coleman goes on to discuss the trade-offs between efficiency and grasp of the meaning that occur between these different methods. He has a chapter, in the book Experiential Learning, in which he moves from this.

Dr. Cross's response to Question VII

As shown by Accent on Learning, I get quite interested in phenomena of cognitive styles. These styles are very close to what Coleman is talking about when he is talking about a kind of intuitive grasp of something. In fact, if you take the individual learner, particularly one attempting problem-solving, you will see almost at once that some people know the answer but are completely unable to tell you how they get it. Even those who may take a long time, but are unable to articulate, are called "intuitive" in Whitman's terms, a field dependent style of learning. In contrast to that is a person who is very analytical, such as an engineer. And, in fact, the research shows that people with that kind of style tend significantly more to choose the sciences, where the intuitive generally chooses the social sciences, etc. This is not, incidentally, related to IQ.

VIII. Dean Coffield's question to Dr. Cross

Would you comment on mastery learning as it relates to special innate ability or talent? I wonder if it would ever be possible, for example, for me to master the violin or oil painting or even creative writing.

Dr. Cross's response to Question VIII

Mastery learning is not a panacea for all that ails education. I think it works better in certain fields than others. On the other hand, I think that education, in particular, has been too ready to accept the concept of innate IQ. The more we study the whole problem the more it looks as though we have considerably over emphasized the role of innate IQ. That is, people have demonstrated that under conditions of mastery learning, under conditions of individualization, and under conditions of self-pacing that students may dramatically, almost unbelievably, increase their learning. For example, teachers working with poorly prepared community college students have reported a difference not only in a particular skill they were teaching, whether that be reading or arithmetic or whatever, but also in the self-confidence that the students gained.

However, if one is talking about the more creative kinds of things such as violin playing or poetry writing or essay writing, certain mastery learning is not necessarily a useful concept at the present time. One of the dangers in overemphasizing competency-based education is that we might shut out things we were not looking for. In other words, the great worry in using preestablished behavioral objectives is that you set them out so clearly that you look only at them; the accidental, incidental, and creative things that happen without anybody having planned them are extremely important.

To support mastery learning is not to withdraw support from creative talents. In fact, if one reads Accent On Learning, I stressed that mastery learning may help with the skills; however, I also think that society has very much over-emphasized the nurture of so-called academic skills, which is really an incredibly narrow range of given abilities. I hope that we as a society will better look for and encourage unique talents.

IX. Dean Hearn's question to Dr. Keeton

Most students entering higher education today are career oriented. If learning styles are to accomodate this orientation, what do you see in the future for what we call liberal education or the liberal arts?

Dr. Keeton's response to Question IX

I start with a bias that there is no conflict between good career education and good liberal education. I have come from 30 year's work at Antioch College where evidence is required for conclusions about learning. Although it is important for me to know whether conclusions have been adequately defended, it is also vital to have the ability to relate effectively to other people in an effort to achieve an objective. Some of those things go beyond the kinds of things we do in the classroom, so I am not at all dismayed by the interest among students in careers. Let me put it this way: any focused interest on the part of students as to what they want to learn would be welcome to me as a teacher, because if I know that a student has a definite interest and I also have a definite agenda I can work a trade-off with that student. In effect, I say, "I'll facilitate his interest if he will facilitate the achievement of mine." I often lay that out explicitly at the beginning of a course with the students. I'm a philosophy teacher.

I'm determined that they shall learn to be good critical analsists whatever else they are interested in. And I will just tell them frankly, "Tell me what you want to do in this course and as long as you will cooperate with what I want to do, I will cooperate with what you want to do--if it's moral and legal." Now, the second piece of this question has to do with the nature of liberal education, and here I think a consensus may be hard to arrive at. I have believed that the appropriate committment of higher education in this respect should be to an education that liberates the individual from the narrowness of the assumptions and outlooks with which he or she came to college. I mean that as no pejorative comment, but I think that any of us have limitations on our outlook until we are assisted by others. Therefore, I am opposed to any fixed doctrine in the subject matter of liberal education and particularly to the idea that what was known in the past is adequate for the future. Liberal education should view itself as a changing motion; I see that as not just compatible with what career education calls for, but actually facilitative of it.

X. Dean Witherspoon's question to Dr. Keeton

How can informative evaluation fit into the State of Tennessee, where there are higher education systems in Tennessee, and where we operate under the MBO?

Dr. Keeton's response to Question X

Let me express a bias in favor of competition in the delivery of higher education service. Now you would expect that from somebody coming from a private college, but if the State systems are going to get as highly organized as I think they must (at least in the coordinate sense), I certainly favor the conduct of that systematization in such a way that there is room for competent people to compete with one another to do some of the same things,

the one better than the other. I don't know how we are going to learn to improve either our administrative practices or our teaching practices at the pace we should unless we have a number of people working on the same problems, attempting invention and improvement in different places and by different methods. Additionally, it seems to me that management by objective does not require what I would call dictatorial management or central planning. It is possible in management by objective to have highly abstract objectives at the central level and more and more specific objectives applied at different levels. (My own work at Antioch is system management work, small program accountability centers, which in turn are aggregated to form campuses, which themselves become larger accountability centers.) One of our requirements is that every accountability center shall financially break-even every year unless given a specific dollar-figure prior exception. To do this we have a sixteen page set of regulations called the Budget Guidelines which define the term "break even." However, within that general system objective for the units, they may charge their own tuition rate, they may change the fees, they may go for soft money or not go for soft money, all the strategies within which they achieve that objective are at their option. So, it seems to me similarly, in the range of the choice of programs. In our system we require that we have a standard that we should not offer a program unless it is either a unique service to the clientele to whom it can be available, that it be performed in a better-than-average manner among such services, or that it be in the process of becoming able to reach that level of quality. Beyond that we do not specify. We don't say you have to teach in semesters or quarters, or you can use the pass-fail system, nor do we specify student-teacher ratios. All those things are left to local administrators. It seems to me that management by objectives is quite compatable

with having more than one system, with having competing systems, and with having decentralization of authority within the systems.

XI. Question to Dr. Cross from the Audience

Can cognitive styles be learned or is it something that one is born with?

Dr. Cross's response to Question XI

To date that is one of the primary questions of the research. How modifiable are cognitive styles. For instance, if a person has a given cognitive style, let's say analytical, but is extremely interested in doing interpersonal relations, which really goes with the other style, can they be taught? At the moment, although it seems that cognitive styles appear early, they remain relatively the same throughout a person's lifetime. Across all kinds of cultures, women seem to have a more global intuitive cognitive style than men. Thus, it looks as if there may be some genetic factor in cognitive styles. However, there is a system of matching cognitive styles which has led to the notion (for instance) that if a student learns well by an analytic method, then one would want to give him an analytic teacher or an analytic subject matter on an analytic experience; however, that's being increasingly questioned. As a matter of fact, Sam Messick, the Vice President for Research at ETS, has proposed that matching cognitive styles is much too simplictic. What we ought to do is have a four way kind of match and mismatch. There may be instances, for example, in which one would want to deliberately work on developing cognitive styles that were not the person's preferred method: that would be called a compensatory style. On the other hand, there is a capitalization match in which you may simply want to strengthen a cognitive style so that it will be outstanding--that is what

we tend to do in engineering, where we try to strengthen and build upon analytic cognitive style. The research is still very much in a state of flux, but I do think that it is a little dangerous to assume that cognitive research has shown that students and teachers who have the same cognitive style like each other better and tend to rate each other more competent than teachers and students who have opposite cognitive styles. The point of knowing about cognitive styles, however, is that one ought to have a deliberate educational strategy. Rather than putting a student in an uncomfortable situation and simply making him or her think they don't quite measure up to what is expected, one ought to consciously say "You seem weak in this style. That discomfort may handicap you in later dealings or in flexibility; therefore, we are going to put you into a situation that may be uncomfortable for you, with that discomfort as part of our teaching goal." And it seems to me, therefore, it's important to understand those concepts.

XII. Question to Dr. Cross from the Audience

Is it possible to predict how long it will take a person to learn, and should the student (as a consumer) know how long he or she can expect to take in learning?

Dr. Cross's response to Question XII

That is one of the things people perpetually ask, "Isn't any employer going to want the person to learn the given thing in three months instead of four?" "Isn't that going to be a benefit in any kind of job?" I would maintain probably not; in fact, I think speed of learning has probably been over emphasized. There are many employers--probably for the majority of the jobs in the country--who want a person who they are sure is competent at doing a particular job. Learning speed may be more important in school than in any

other place. Most adults don't have harsh time limits on our learning. We do pretty much at our own pace in the real world. Similarly, our explicit national policy that all people should be entitled to two years of public supported education beyond high school should be that all students be entitled to learn the basic survival skills of communication. For some people that may occur very rapidly. For some people it may take longer than two years of post secondary education. Perhaps we should start earlier on learning the basic survival skills, and by this I mean the communication skills of speaking, listening, reading, writing, and so forth.

XIII. Question to Dr. Cross from the Audience

Are you condemning education, elementary through secondary?

Dr. Cross's response to Question XIII

Let me try to be a little more tactful than I ordinarily am and say that my criticism is of all education from pre-elementary school through post-graduate school. I really think all of us could do a great deal better than we are doing with the knowledge that is presently available to us. One of the reasons I tend to come on as a strong critic of some of our administrative structural problems is because I often run into innovative, creative, dedicated teachers who are frequently thwarted and frustrated in their work with individuals by "the system": the system of budgeting, the system of credit hours, the system of grading, the academic calendar system, the whole thing. It seems to me there are very logical answers as to how we could do better, answers that would free up educators from elementary school through graduate school to do a better job of teaching. That's one of the reasons I am terribly interested in the movement that has been called non-traditional alternatives. One way to foster alternatives is to provide for

some healthy competition among the educational systems. Thus, while I don't want the whole country to be Grand Valley State College, I'm certainly delighted that they exist to show us an alternative that works for the students they are serving.

Dean Coffield's Conclusion

I am not really comfortable in apologizing for being something of a traditionalist: we can improve on many things that we do, but I have not yet reached the point that I'm ready to abandon our system of higher education. There is something special about a university to me, it always has been and always will be. I am aware of the criticisms that have been leveled toward our society in general and toward systems in general. I think all of us should work toward improvement, but we ourselves have been our own worst critics. I think it might be better, in some instances, to accentuate the positive things that we are doing rather than to accentuate our shortcomings. Maybe our public then would support us a little bit better.

PERSPECTIVES
Dr. John Richardson and Dr. Hilton Smith

Dr. John Ricahrdson:

"To say you taught when no one's learned is like saying you sold when no one's bought." I think some of us may fit that category. I read a statement recently by Dr. Henry Rosasky, Dean of the Faculty of Arts and Sciences at Harvard. He said that at every commencement the president of Harvard welcomes new graduates of the college to the company of educated men and women, and having witnessed the ceremony for many years he confessed to an increasing sense of unease with the phrase. Now, I share his unease, and I did as I sat on the stage at Memphis State and awarded degrees. If the dean is not at ease with the quality of the graduates of Harvard at this time, can any educator feel comfortable?

In the phrase of another age,"The natives are getting restless." In the media, at all levels, people are receiving information reflecting on the inadequacies of our educational system, from kindergarten through the doctoral programs. We can hardly challenge the statement that too many young people are entering adult life without the skills and understandings necessary for effective personal living or useful citizenship. For too long, we have told the young people that to acquire a college degree is worth lifetime earnings of $200,000 more than those received by high school graduates. Since we began using that figure, inflation has hit and now the difference is up to about a half a million or more. But we have never bothered to explain to these young people that an education--pure and simple-- is what

should be sought not merely an imitation sheepskin as evidence of an education which in reality has not been acquired. Similarly, we all know what's been happening to college grades: they have been going up, even though evidence points to the fact that the entering classes have been less well-prepared.

There was also a time when I had faith in undergraduate grades from most institutions. In later years, however, I lost that faith. I never had much faith in graduate school grades, and in recent years I've had even less--except in a few selected disciplines. Some years ago, I attended a conference for doctoral degree granting institutions in the Southeast, and every doctoral degree granting institution of the Southeast was represented there. The Educational Testing Service sponsored the meeting, and we were discussing the various problems of evaluating and assuring excellence at the graduate level. Someone asked the deans how many of them had faith in graduate grades. Only one hand went up around the discussion table, the man sitting next to me, and I asked how long he had been a dean. "Two months," he said.

I'll pause here to say that I happen to be proud of the young people who completed graduate study during my tenure at Memphis State University. But one reason why they did so well and have done so well is that I was dictatorial as to who we let into a program. I had the opinion that if they already had an established level of excellence, the faculty couldn't do much to harm them. I knew not only that they would probably go on to achieve even higher levels of excellence; moreover, I also knew that they would challenge the faculty so that faculty members would go beyond what they would with merely mediocre students.

Today, however, our institutions can no longer assume that the inadequacies of elementary and secondary education will be made up in a four year undergraduate program. To award a master's degree to non-readers and non-writers is a great disservice to society and even a greater disservice to the individuals, since they are led to believe that they have something that they really do not. The institutions must, and I stress, must identify the inadequacies on the front end of the program, either baccalaureate or master's, and require that they be corrected before the individual is allowed to advance.

Community colleges are attempting to do something with this problem now, and they are to be commended for what they are doing. They are now giving non-credit "developmental" courses that are helping correct the deficiencies for many youngsters who find themselves very inadequately prepared. I received a brochure very recently from a university advertising its community college teacher preparation program, and I was surprised to see that the only programs they advertised were in the developmental areas of reading, English, mathematics, and science; they had only one other, in guidance and counseling for community college students. I suppose their rationale for this elimination of other programs was that if they lifted the students to the equivalent of a high school graduate, no special preparation was required for teachers of the regular disciplines. I'm not sure that's true.

If all of this appears to reflect concern for the educational status quo then it sounds exactly as I mean for it to. I have been associating with a different crowd in recent months. They are members of the establishment, so to speak: businessmen, engineers, manufacturers, bankers, investors, and other similar professional persons. And to say they are disturbed is putting it rather mildly. Their experiences with many of our recent graduates have led them to a feeling of concern.

I saw a recent report dealing with the fact that many of Oregon's school districts have not been in operation since Thanksgiving. (The situation is almost as bad as in Ohio.) These communities are continuing to vote down school levies, thus reflecting the attitude that I seem to find with some of the people with whom I deal. If you think these problems do not affect you, then you are living in a dream world. A University of Oregon professor attempted to assertain the reasons for the levy being voted down, and these were some of the things he learned from the parents: (1) The parents said the schools are "not doing anything" for their children; (2) others said the kids were unable to read; (3) others said discipline had broken down, and the schools lacked order; (4) finally, others cited the schools' failure to teach values. I might insert here that the teachers in those schools were from institutions very much like yours.

We cannot be satisfied to limit our accomplishments to assuring mastery of the basic skills. We must go beyond that. Where is the work ethic that was so strong in our people a few generations ago?! I just read a series of well-researched and well-documented articles about people who are currently carried on our rolls as unemployed but who have no intention of taking a job. Their reasons make interesting reading. But I wonder how widespread this situation is. How many of our people understand that wages cannot keep advancing without increases in production unless we are willing to settle for the kind of high inflation which works hardships on us all?

One final problem: deficit financing. I recently visited with a university professor and we talked a little bit about the necessity of saving. He said anybody that saves is crazy. And I said, "Wait a minute, I don't agree with that. Did you pay cash for your house?" He said, "Oh no," and I asked where he got the money. When he said, "The bank," I asked

where the bank's money came from. He said, "I don't know." I said, "From people who were saving, otherwise it wouldn't have been there for you to borrow"! Do you understand what saving means to the economy of this nation? Without it we are going to have a lot fewer jobs. The average person doesn't understand that, and somehow nobody has taught it anywhere.

Continuing education, through both credit and non-credit courses, may be doing more to solve some of these problems than any other areas of our institutions. I happen to know a group of people who are in a non-credit course on something I was just talking about, investments. They are already out of school; they either have degrees or they don't; they are not concerned with grades; they are simply attempting to learn something they need to know. And so, they are excited about the course. They are interested in it, they are taking it because they want to, and they are talking to their friends about it.

My point in all of this is a simple one: education can't be expected to do the whole job, but we can do a better job than we have done; most surely, we need to reexamine some of the things we are doing, and stop doing the ineffective ones and begin developing clear-cut rationales for the things we wish to continue.

Dr. Hilton Smith:

There are both advantages and disadvantages to being the last person to address any given topic: the advantage is that one knows what everybody has said, and the disadvantage is they may have said all the things one wanted to say. I made a list of six items which I think have been important during the last fifteen years, and the remarks that follow are my brief assessments of each item's importance and each's future implications.

The first one is numbers. We have had a tremendous increase in the numbers of people going to school. When I became Graduate Dean in 1961, we had a total population in our schools of approximately 10,000 students and something like 1500 graduate students. The number of total students has tripled and the number of graduate students is about five times as great as it was then. Of course, it has been hard to accommodate these people, but we have done it. And the legislature and other people have been able to provide us in some reasonable way with funds to do this. Now we're faced with a decrease in numbers, and we're going to be faced with real problems convincing people that we are going to have to have enough funds to do some of the things that we were't able to do as we were growing: to add quality to our programs, to invest in a broader type of program, and to work in interdisciplinary programs are some things we are going to have to do in the future. None will be easy.

The second of my six interwoven items is funding. The method of funding our public universities has changed very greatly from the time when we used to go to the legislature and make the best case we could and hope to get a reasonable amount of money. It use to be that when people objected to football at the University of Tennessee, I would say to them, "Now just remember one thing: you can find all the fault you want to with

football, but when we go to the legislature after a winning season we get much more money that we do if we go after a losing season." Now, however, the legislature appropriates money after the institutions have been through a certain process of the Tennessee Higher Education Commission in which we talk about the number of student credit hours that were generated and that's the thing which determines primarily how much money we get. I think this method has done very much for education but I also think it can do much harm unless we're careful, because student credit hours tend to have sort of a leveling effect. Everybody's the same, everywhere, when you have so much per student credit hour. In some way or another, if we are going to progress in the future and do many of the things we want to see done, we are going to have to build some other things into the plan that are not there now. There is the beginning of an attempt to do this now, but it's not going to be easy.

The third thing that I have seen happen is the assessment of what the students are doing. You can call it grades, you can call it credentialing at the end, you can call it anything you want, but the question of how one can assess what students are doing has been very important and it has changed a lot. When I first started teaching, one gave a student a certain amount of material, examined him two or three times, and gave him a grade. That was it. And the grade had some significance. Educators thought it had some significance, and the students thought it had a lot of significance. Now, however, I have seen changes from systems in which there are grades to systems using only pass-fail; from systems where the instructor said "This is what you're supposed to do" to challenge grade systems where the student says "This is what I want to do." The question of course comes: What is a grade worth? What is our assessment worth? I think we may have pushed

a little bit too far in this way. In fact I see it in our own university--a move back toward examinations. We did away with the final examination period a few years ago. Now we're studying whether or not we should bring it back, and there are some hints that students may want it back because they want to know how they are doing in a course. I really expect to see a return to some sort of a conventional grading system. I might say this is nothing new: a good many years ago, when I was in college, the students cried out for a pass-fail system, they tried it for a year, and the next year they cried out for a return to grades. It's not anything new, but I really believe we may be coming back to a better attempt to assess students.

The fourth thing I want to mention is relevance of programs. More and more we're asking the question, "What's going to happen to the student when he gets through with his program? Does it prepare him for something? Is he going to be a doctor? Is he going to be a teacher? Is he going to be this, or that, or the other thing?" The relevance of the program has become very important over the last few years, and I think that perhaps again we may move away from that a little bit. As a matter of fact, education for its own sake may become more important to us in the future, but I want to say a little more of that later.

The fifth thing I want to mention is equal opportunity. When I began as an administrator, equal opportunity was a phrase that wasn't on everybody's mine. People really didn't know much about equal opportunity, even though there were many chances for exceptional persons to get ahead. And then, all of a sudden, changes came: the Civil Rights Act came, women became more interested in equal opportunity, and other so-called minority groups have gone all out for equal opportunity. This has been a very good thing, and I am very much pleased that opportunities continue to expand. We will,

however, need to beware of one potential problem: we are going to have to be sure that equal opportunity results in equal opportunity. By this I mean that we can't treat students absolutely the same: disadvantaged entering students will need special help so that they do not become disadvantaged graduates. Some way or another, between the time they enter in a disadvantaged way, and the time they leave they must be equal to others who come out of the program. This has concerned me a great deal recently. I have seen many examples of it from many institutions, and I think there is going to be a real opportunity not only at the beginning of education, but at the end of education as well. And in order to do this we have to some way or another make up for the deficiency of the student as he enters higher education. I had this brought forth to me very forcefully a good many years ago when I was teaching freshman chemistry at another university, in an area where practically everybody who entered that university had a high school chemistry course. But there were always about 30 to 40 students who had not had high school chemistry. So they decided to give them a special session under special instruction. This worked out very well, but there was only one problem with it: at the end of the year, those people were just as much behind as they were when they started. And then they were faced with going into sophomore chemistry, still disadvantaged. I think this is something we are going to have to worry about a great deal in the future.

The last thing that I want to mention, the sixth item, is the role of the federal government in our educational process. At the graduate level, the federal government has taken a real role in educational processes, primarily through the funding of programs of education (mostly of a training nature) in order to fill what the government believed was needed in the educational process. And so in the sixties we found them providing a huge

number of fellowships for people who were going into teaching. And before we knew it, we found that there were so many people in teaching that we couldn't place all the people who were graduating. A few years ago, we were told that there appeared to be a surplus of engineers, our support of engineering programs from federal sources and other sources were pretty largely withdrawn, and the number of people who wanted to go into engineering decreased; now we find ourselves without nearly enough people going into engineering. I guess what I'm trying to say is that the education of a person takes a considerable period of time and we look at the needs of our nation at least eight years from now, when the people going to college are going to finish graduate school. I am not smart enough to tell you how to predict what the needs of our nation are going to be eight years from now, as far as what type of people should be educated, but I do know that we have been going in a cycle, and we generally seem to be at the wrong place in the cycle at the wrong time. Some way or another, we have to get a smoothing out of that cylce.

Finally, I want to append just a word or two about the purpose of education by citing an old story. It's a story about a mountaineer, a really very back-woodsy mountaineer--so back-woodsy that he had never seen a mirror. One day he happened to go by a road just after a load of household goods had passed by, he saw that a small mirror had slipped off the load of goods and onto the soft grass by the road side. He picked up the mirror and looked at it. Never having seen a mirror before and knowing nothing about the laws of physics, reflection and what-not, he looked at it again and said, "That's a wonderful picture of pappy." So he took the picture of pappy (the mirror) and started home with it, but as he walked toward the house he began to worry more and more because he remembered that his wife wasn't very

favorably inclined towards pappy, and he wasn't sure he wanted to take the picture of pappy into the house. Nevertheless he slipped it under his jacket, went into the house, went up in the loft, and hid it way back under the eaves. The next day, after he left the house, his wife (who knew that he had sneaked something into the house) went up under the eaves and poked around until she finally found the mirror. She brought it down into the light and looked at it again and again, saying, "My oh my, so that's the old hag he's been running around with."

The purposes of the story are two: first of all, they were both ignorant people; second is that the woman was prejudiced, and--as usual--if you're prejudiced, the problem ends up resting with you. The point I want to make is this: education is just for the sake of learning and not necessarily for the sake of preparation for this, that, or the other vocations. I see particularly older people in our area who are coming to our university to take a course simply because they want to know something. Men and women, forty to fifty, coming to take a course in archeology so that they can go out and have fun just going around. But they want to do it in the right way so they can preserve what they found for future generations. We see people coming to take art, painting, music, English, languages--all these things they simply want to learn, not because they want to go out and use them. Whil we may disagree as to the exact definition of a "liberal education," I hope we will never have its intent out of our minds, especially in these days when we tend to say that all education must have a purpose: surely one of education's major purposes is to liberate the student from ignorance and from prejudices. That simple task is, I fear, far more easily said than done.

EVALUATION FORM

THE SECOND ANNUAL TENNESSEE SYMPOSIUM ON HIGHER EDUCATION

__9__ 1. Central Administration (State agency, University or System)

__35__ 2. Academic Dean, Department Chairman, or Division Chairman

__25__ 3. Continuing Education Administrator

__27__ 4. Faculty Member

__6__ 5. Student

__10__ 6. Other

__112__ 7. Total Returning Evaluation Forms

1. I first learned about the Symposium by:

   Brochure mailed directly to me __22__ ; Brochure passed on to me by a colleague __48__; Radio-newspaper __2__ ; Word-of-mouth __10__ ; Other __14__ .

2. The program format provided sufficient opportunity for participation.

   Strongly agree __26__ ; Agree somewhat __52__ ; Undecided __5__ ; Disagree somewhat __15__ ; Strongly disagree __6__ .

3. Program content was sufficiently varied to cover a wide-range of interest.

   Strongly agree __26__; Agree somewhat __58__; Undecided __7__; Disagree somewhat __14__; Strongly disagree __2__ .

4. The major presentation helped me develop new ideas and concepts which I can use in my work.

   Strongly agree __20__ ; Agree somewhat __56__; Undecided __17__ ; Disagree somewhat __8__ ; Strongly disagree __13__ .

5. The purpose and objectives of the Symposium are relevant to higher education.

   Strongly agree __71__ ; Agree somewhat __28__; Undecided __2__ ; Disagree somewhat __1__ ; Strongly disagree __0__ .

6. The length of each session was:

   Much too long __2__ ; Somewhat long __35__ ; About right __65__ ; Somewhat short __1__ ; Much too short __0__ .

7. The small group sessions were an important part of the symposium.

   Strongly agree 31; Agree somewhat 21; Undecided 18; Disagree somewhat 22; Strongly disagree 7 .

8. I would like to see other programs on issues related to:

   List: Evaluation, Teaching Methods, Flexible Scheduling & Curriculum Design, Alternatives to Grading, Course Design, Staff Development, MBO, Evaluation of Non-Traditional Learning, Future Higher Education Trends, Faculty Rank and Tenure, Funding, Student Services.

9. I would like to receive information on future developments throughout the State.

   Strongly agree 86; Agree somewhat 13; Undecided 0 ; Disagree somewhat 1 ; Strongly disagree 0 .

10. The location of the Symposium should be:

    (1) Kept in Middle Tennessee area 81.
    (2) Alternated among East, Middle, and West Tennessee locations 21.

If you would like to make additional suggestions, please use this format.

1. The greatest overall strengths of the symposium were:

   Small group discussions, good speakers, speakers from out-of-state, Panel reactions, well organized, Question and Answer period, Two systems together, Socialization, Dr. Cross, Good mixiture of people on program, Dr. Houle, The Intellectual Climate, Question and Answer session. Wide representation from institutions.

2. The greatest overall weaknesses of the symposium were:

   Too much theory, Evening poor time for small groups, More examples of implementation, Schedule too cramped, No meetings after dinner, Too many speakers, Lack of faculty participation, Use new presentation techniques, Time with speakers, Topics hashed and rehashed, Small groups need more structure, Lack of emphasis on measurement of learning, Need more presidents to attend, February bad time, Tasteless jokes, Less introductions, Change sexist jokes, Too many people from school of education on program.

3. Additional comments: (Future topics, suggested changes in format, etc.)

   Let students ask questions, Too many sessions on Wednesday, Let questions follow presentation, Refreshments good, Real life applications, Let panelists interact with each other, Need time to talk with fellow educators, More questions from floor, More use of small sections, Emphasis on specifics, More community college people.

THE SECOND ANNUAL TENNESSEE SYMPOSIUM ON HIGHER EDUCATION

LEARNING AND THE LEARNERS

Middle Tennessee State University
Murfreesboro, Tennessee

February 9 - 10, 1977

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